



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,382	04/18/2006	Ruihua Hu	USP3214C/SZ103-HRH	1876

30265 7590 08/14/2009  
DAVID AND RAYMOND PATENT FIRM  
108 N. YNEZ AVE., SUITE 128  
MONTEREY PARK, CA 91754

EXAMINER
----------

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
----------	--------------

1797

MAIL DATE	DELIVERY MODE
-----------	---------------

08/14/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,382	<b>Applicant(s)</b> HU, RUIHUA	
	<b>Examiner</b> MINH-CHAU T. PHAM	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gieseke et al (2003/0182909 A1).

Gieseke et al disclose a fluid filter (see 100 in Fig. 1) with a filter assembly (50) comprising a plurality of corrugated filtering plates (123) and a plurality of flat filtering plates (132) alternated into the corrugated filtering plates (see Fig. 2) to overlap with corrugated filtering plates with a Z shaped manner so as to form a filter stack wherein each of the corrugated filtering plates is reserved with two side plain edges and remaining portion of the corrugated filter plate is prepared corrugated ridge, wherein each of the corrugated filter plates is respectively welded onto a pair of neighboring flat filtering plates at opposed edges such that two sides of the filter stack are enclosed with Z shaped ending alternatively applied as fluid inlet and outlet in practice (see paragraph 0031). Gieseke et al further disclose the filter having two sides coated with sealant glue separating with an inner surface of the outer casing (see paragraphs 0039, 0040).

As to the numerical height requirements, i.e., "height of each layer of the filter stack is arranged between 2-10 mm" and "interval of each corrugated filtering plates ranged between 4-20 mm" of claims 17, 21 and 22, "plain edge sized between 3-8 mm" of claim 19, the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these

Art Unit: 1797

requirements would be arbitrary and therefore obvious. Applicants **must** show that these requirements are critical. *In re Woodruff, 16 USPQ 2d 1934.*

### ***Response to Amendment***

Applicant's arguments filed on May 21, 2009 have been fully considered but they are not persuasive.

Applicant argues that the primary reference "Maus disclose layers of gas-impermeable material forming flow guide surfaces defining mutually separate flow paths dividing a gas flow into a plurality of mutually separate partial gas flows and guiding the plurality of partial gas flows in a flow direction, not a Z-shaped filter having flat filtering plates being alternated into the corrugated filtering plates to overlap with corrugated filtering plates, as claimed". The Examiner now drops both the Maus and the Elbers references and newly introduces Gieseke et al (2003/0182909 A1) as the primary reference under the 103(a) rejection of the claims to show:

Gieseke et al disclose a fluid filter (see 100 in Fig. 1) with a filter assembly (50) comprising a plurality of corrugated filtering plates (123) and a plurality of flat filtering plates (132) alternated into the corrugated filtering plates (see Fig. 2) to overlap with corrugated filtering plates with a Z shaped manner so as to form a filter stack wherein each of the corrugated filtering plates is reserved with two side plain edges and remaining portion of the corrugated filter plate is prepared corrugated ridge, wherein each of the corrugated filter plates is respectively welded onto a pair of neighboring flat filtering plates at opposed edges such that two sides of the filter stack are enclosed with Z shaped ending alternatively applied as fluid inlet and outlet in practice (see paragraph

Art Unit: 1797

0031), as claimed. Gieseke et al further disclose the filter having two sides coated with sealant glue separating with an inner surface of the outer casing (see paragraphs 0039, 0040), as claimed.

As to the numerical height requirements, i.e., "height of each layer of the filter stack is arranged between 2-10 mm" and "interval of each corrugated filtering plates ranged between 4-20 mm" of claims 17, 21 and 22, "plain edge sized between 3-8 mm" of claim 19, the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these requirements would be arbitrary and therefore obvious. Applicants **must** show that these requirements are critical. *In re Woodruff, 16 USPQ 2d 1934.*

Applicant's arguments with respect to claims 17-22 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU T. PHAM whose telephone number is (571)272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Minh-Chau T. Pham/  
Examiner, Art Unit 1797  
August 12, 2009